Claims

What is claimed is:

1. A longevity-associated genetic locus comprising a region of human chromosome 4 having a linkage to marker D4S1564.

2. The locus of claim 1, wherein said genetic locus is contained within an approximately 20 cM region surrounding said marker.

3. A genetic locus associated with resistance to age-related disease comprising a region of human chromosome 4 having a linkage to marker D4S1564.

4. The locus of claim 3, wherein said locus is contained within an approximately 20 cM region surrounding said marker.

5. A polymorphic marker indicative of propensity for longevity on human chromosome 4, wherein said marker is contained within an approximately 20 cM region surrounding marker D4S1564 on human chromosome 4.

6. A polymorphic marker indicative of propensity for resistance to age-related disease on human chromosome 4, wherein said marker is contained within an approximately 20 cM region surrounding marker D4S1564 on human chromosome 4.

7. A method for identifying propensity for longevity, such method comprising the steps of:
   a. amplifying DNA in the region of human chromosome 4 comprising a D4S1564 marker; and
   b. detecting the presence of a polymorphic variant of the D4S1564 marker, wherein the presence of said variant is indicative of propensity for longevity.

8. The method of claim 7, wherein said polymorphic variant is contained within an approximately 20 cM region surrounding said D4S1564 marker.

9. A method for identifying propensity for age-related disease, comprising the steps of:

a. amplifying DNA in the region of human chromosome 4 comprising a D4S1564 marker; and

b. detecting the presence of a polymorphic variant of the D4S1564 marker, wherein the presence of said variant is indicative of propensity for resistance to age-related disease.

10. The method of claim 9, wherein said polymorphic variant is contained within an approximately 20 cM region surrounding said D4S1564 marker.

11. A method for determining the propensity for longevity, the method comprising the steps of:

a. obtaining a first tissue or body fluid sample from a first subject of at least 98 years of age;

b. obtaining a second tissue or body fluid sample from a second subject who is related to said first subject;

c. amplifying DNA obtained from said first and second samples in a region of human chromosome 4 that contains a D4S1564 marker;

d. detecting the presence of a polymorphic variant in said region in both said first sample and said second sample; and

e. determining that said second subject has a propensity for longevity if said polymorphic variant is detected in both said first sample and in said second sample.

12. The method of claim 11, wherein said polymorphic variant is contained within an approximately 20 cM region surrounding said D4S1564 marker.

13. A method for identifying propensity for age-related disease, the method comprising the steps of:

a. obtaining a first tissue or body fluid sample from a first subject of at least 98 years of age;

b. obtaining a second tissue or body fluid sample from a second subject who is related to said first subject;

c. amplifying DNA obtained from said first and second samples in a region of human chromosome 4 that contains a D4S1564 marker;

d. detecting the presence of a polymorphic variant in said region in both said first sample and said second sample; and

e. determining that said second subject has a propensity for resistance to age-related disease if said polymorphic variant is detected in both said first sample and in said second sample.

14. The method of claim 13, wherein said polymorphic variant is contained within an approximately 20 cM region surrounding said D4S1564 marker.